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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/617,475	07/11/2003	Robin G. Skinner	TEC1273	3937

832 7590 10/31/2005

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FORT WAYNE, IN 46802

EXAMINER
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BELT, SAMUEL E

ART UNIT	PAPER NUMBER
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3746

DATE MAILED: 10/31/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

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**SUPPLEMENTAL**  
**Office Action Summary**

Application No.

10/617,475

Applicant(s)

SKINNER ET AL.

Examiner

Samuel E. Belt

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 11 July 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.

- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### **Information Disclosure Statement**

1. The listing of references in the specification is not a proper information disclosure statement. 37 CFR 1.98(b) requires a list of all patents, publications, or other information submitted for consideration by the Office, and MPEP § 609.04(a) states, "the list may not be incorporated into the specification but must be submitted in a separate paper." Therefore, unless the references have been cited by the examiner on form PTO-892, they have not been considered.
2. The information disclosure statement (IDS) submitted on 7/11/2003 is acknowledged. Since submission complies with 37 CFR 1.97 and 1.98, the examiner has considered the references listed therein.

### **Claim Objections**

3. Claim 1-16 are objected to because of the following informalities: In claims 1, 12, and 14, the applicant's use of the general phrase "bearing surfaces" is unclear, in the regard that the bearing could be construed as a couple of different objects in the applicants device. In order to expedite the prosecution of this case, it is suggested that the phrase "bearing surfaces" be changed to "contact surfaces".

**Claim Rejections - 35 USC § 103**

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1, and 7-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Clendenin et al. (US Patent No. 6280154) in view of Dochterman (US Patent No. 4,186,319).

5. In regard to Claim 1, as shown in Figure 1, Clendenin et al. disclose a compressor assembly comprising:

A: A compression mechanism (58,72);

B: A motor including a rotor and a stator (46,28), said stator having a plurality of stacked laminations (28);

C: A shaft having a first end and an opposite second end (30);

6. Although Clendenin et al. disclose a compressor assembly, Clendenin et al. fail to teach:

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D: A bearing support structure with an outer ring having a plurality of circumferentially distributed bearing surfaces lying in a common plane.

Additionally, Clendenin et al. fail to teach a plurality of recesses positioned between said circumferentially distributed bearing surfaces for the purpose of receiving deformations formed in said stator due to the compressive forces applied by circumferentially distributed bearing surfaces.

Dochterman teaches a motor end shield (Fig. 1, item 16), which is the bearing support structure, comprising an outer ring with several circumferentially distributed bearing surfaces that are coplanar and a plurality of recesses positioned between said bearing surfaces, that are capable of receiving deformations formed in said stator (Column 1 line 55 – Column 2 line 5). This support structure eliminates distortions on the end shield (bearing support structure), caused by the compressive forces of the circumferentially distributed bearing surfaces. Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the Clendenin et al. device by replacing the motor with the motor as taught by Dochterman in order avoid distortion effects in the motor that can cause the bearing, that supports the shaft, to become misaligned and eventually leading to the damage of motor components.

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7. Claims 2-6 and 12-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Clendenin et al. (US Patent No. 6280154) in view of Dochterman (US Patent No. 4,186,319) as applied above and further in view of Fargo (US Patent No. 5929545).

8. Clendenin et al. and Dochterman disclose the aspects of the claimed apparatus as explained above, but fail to teach the specific motor configuration of the stator being directly engaged with the bearing support and crankcase.

9. Fargo teaches that it is known to construct electric motors so that the end shields are mounted directly on the stator and are secured with the use of a threaded screw or a through-bolt (column 1, lines 11-14). Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the Clendenin et al. and Dotcherman device by mounting the end shields of the motor directly to the stator using a plurality of fasteners in order to provide a desirable high tolerance relationship between the shaft and stator body and also advantageously resist any movement or distortion between the stator and bearing support body, thus creating a more efficient motor.

10. In regard to Claim 12, Clendenin discloses a method of supporting a shaft in a compressor, the method comprising:

- A:** Providing a motor having a laminated stator and a rotor;
- B:** Operably coupling a shaft with said rotor;
- C:** Operably coupling a compressor mechanism to a first end of the shaft;
- D:** Rotatably supporting said shaft within said central body

11. Although Clendenin et al. disclose a method of supporting a shaft in a compressor, Clendenin et al. fail to teach:

**E:** Providing a bearing support member having a central body and a plurality of circumferentially distributed bearing surface lying in a common plane and a plurality of recesses positioned between said circumferentially distributed bearing surfaces;

**F:** Compressively engaging one end of said laminated stator with said plurality of circumferentially distributed bearing surfaces wherein at least one stator lamination at least partially deformingly protrudes into at least one of said recesses.

12. Dochterman teaches a motor end shield (Fig. 1, item 16), which is the bearing support member, comprising a central body that can rotatably support said shaft and an outer ring with several circumferentially distributed bearing surfaces that are coplanar and a plurality of recesses positioned between said bearing surfaces (Column 1 line 45 – 46). Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the Clendenin et al. device by replacing the claimed motor with the motor as taught by Dochterman in order to advantageously eliminate any problems with displacement or distortion of the bearing support.

13. Fargo teaches that it is known to construct certain electric motors so that the end shields compressively engage one end of said laminated stator and are secured with the use of a threaded screw or a through-bolt (column 1, lines 11-14). Therefore it

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would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the Clendenin et al. and Dotcherman device to compressively engage one end of said laminated stator so as to cause the stator laminations to deform into one of the said recesses.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Samuel E. Belt whose telephone number is (571) 272-7820. The examiner can normally be reached on M-F, 8 - 4:30EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy Thorpe can be reached on (571) 272-4444. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Samuel E. Belt  
10/13/2005

SEB

  
CHARLES G. FREAY  
PRIMARY EXAMINER